

BEST AVAILABLE COPY

IN THE CLAIMS:

1. (Currently Amended) A method of fabricating a semiconductor device, the method comprising:
 - forming a gate on a semiconductor substrate, the gate including opposing side surfaces;
 - depositing an oxide material over the gate electrode and the semiconductor substrate, the opposing side surfaces of the gate being substantially free of the oxide material; and
 - forming spacers on the opposing side surfaces of the gate, the spacers contacting the opposing side surfaces of the gate substantially along the opposing side surfaces.
2. (Original) The method of claim 1, the gate being doped with p-type or n-type dopant.
3. (Original) The method of claim 2, the sidewall spacers mitigating diffusion of dopants from the opposing side surfaces of the gate.
4. (Original) The method of claim 1, the oxide material being deposited by physical vapor deposition.
5. (Original) The method of claim 4, the physical vapor deposition method being anisotropic.
6. (Original) The method of claim 4, the physical vapor deposition method comprising at least one of a collimated sputtering method, a long throw sputtering method, or an ionized metal plasma sputtering method.
7. (Original) The method of claim 1, the oxide material comprising at least one of SiO_2 , AlO_3 , ZrO_2 , HfO_2 (AlHfO_x), HfO_2 , La_2O_3 , Y_2O_3 , silicon oxynitride, or hafnium silicon oxynitride.

BEST AVAILABLE COPY

8. (Original) The method of claim 1, the formation of the spacers further comprising providing a nitride layer over the gate after depositing the oxide material; and etching the nitride layer.

9. (Original) The method of claim 8, further comprising implanting an LDD implant after forming the gate, but before depositing the oxide layer; and implanting a source/drain implant after forming the nitride spacers.

10. (Original) The method of claim 9, the LDD implant and the source/drain implant forming a source region and a drain region of the semiconductor device.

11. (Original) The method of claim 10, the gate forming part of a p-type metal oxide semiconductor (PMOS) structure.

12. (Original) A method of fabricating a semiconductor device, the method comprising:
forming a gate on a semiconductor substrate, the gate being doped and including opposing side surfaces;
depositing an oxide material over the gate and the semiconductor substrate, the opposing side surfaces of the gate being substantially free of the oxide material;
forming a nitride layer over the gate and the oxide material; and
etching the nitride layer to form nitride spacers on the opposing side surfaces of the gate, the nitride spacers contacting the opposing side surfaces of the gate substantially along the opposing side surfaces.

13. (Original) The method of claim 12, the nitride spacers mitigating diffusion of dopants from the opposing side surfaces of the gate.

14. (Original) The method of claim 12, the oxide material being deposited by physical vapor deposition.

BEST AVAILABLE COPY

15. (Original) The method of claim 14, the physical vapor deposition method comprising at least one of a collimated sputtering method, a long throw sputtering method, or an ionized metal plasma sputtering method.

16. (Original) The method of claim 12, the oxide layer comprising at least one of SiO_2 , AlO_3 , ZrO_2 , HfO_2 ($\text{AlHf})\text{O}_x$, HfO_2 , La_2O_3 , Y_2O_3 , silicon oxynitride, or hafnium silicon oxynitride.

17. (Original) The method of claim 12, the gate comprising a polysilicon material doped with a p-type dopant.

18. (Original) The method of claim 12, further comprising: implanting a LDD implant after forming the gate, but before depositing the oxide layer; and implanting a source/drain implant after forming the nitride spacers.

19. (Original) The method of claim 12, the gate forming part of semiconductor device comprising a PMOS structure.

Claims 20-23 (Canceled)

24. (New) The method of claim 1 wherein depositing an oxide material over the gate and the semiconductor substrate includes depositing an oxide material on the gate and on the semiconductor substrate.

25. (New) The method of claim 1 wherein forming a gate on a semiconductor substrate includes forming a conductive layer over the substrate, and patterning the conductive layer to form the gate.

BEST AVAILABLE COPY

26. (New) The method of claim 12 wherein depositing an oxide material over the gate and the semiconductor substrate includes depositing an oxide material on the gate and on the semiconductor substrate.

27. (New) The method of claim 12 wherein forming a gate on a semiconductor substrate includes forming a conductive layer over the substrate, and patterning the conductive layer to form the gate.